

ABSTRACT

[0059] Melt blended HDPE for pipe and fitting material having a density in the range of 0.945 to 0.955 grams per cubic centimeter, values of melt flow index according to ASTM D1238 less than 0.4 with enhanced physical properties and process characteristics and blend methods are described in which virgin, reprocessed, wide specification, flake or regrind HMW homopolymer and copolymer HDPE (5 to <50 %) are included as a minor component and HMW HDPE (>50 to 95%) is the major component. The method of selecting and blending the HMW HDPE copolymer, LMW HDPE homopolymer and LMW HDPE copolymer provides the corrugated HDPE pipe manufacturer with enhanced HDPE compositions and the means to independently design physical properties and enhance processability while exceeding AASHTO's standard for ESCR.